JVC

No. 2339

SERVICE MANUAL

MODEL VR-5515LX

FM/MW/LW STEREO RECEIVER

DIMENSIONS : H — 6-1/8", W — 17-3/4", D — 12-3/4" (15.5cm) (45.2cm) (32.4cm)

WEIGHT : 21.1 lbs. (9.6 kg)

SPECIFICATIONS

AUDIO SECTION

Circuit	:	Pure Complementary O.C.L.
RMS Power		
All Channel Driven	:	20Hz~20kHz Power Bandwidth 19.5W per channel at 8Ω 21W per channel at 4Ω
All Channel Driven (at 1kHz)	:	44W (22W x 2) at 8Ω 52W (26W x 2) at 4Ω
Total Dynamic Power	:	66W (33W x 2) at 8Ω 100W (50W x 2) at 4Ω
Load Impedance	:	4~16Ω
Harmonic Distortion at Rated Power	:	0.8%
IM Distortion at Rated Power	:	0.8%
Power Bandwidth (IHF)	:	15Hz~25kHz
Frequency Response	:	15Hz~50kHz ±1dB
Channel Separation	:	50dB at 1kHz
Input Sensitivity for Rated Output	:	Phono 2.5mV/50kΩ Aux 120mV/50kΩ Tape Play 120mV/50kΩ Mic 3mV/50kΩ
Equalizer	:	RIAA
Bass Control	:	±10dB at 100Hz
Treble Control	:	±10dB at 10kHz
Signal to Noise Ratio	:	Phono 65dB Aux 70dB
Loudness	:	+12dB at 50Hz +6dB at 10kHz
Damping Factor	:	40 at 8Ω

FM TUNER SECTION

Tuning Range	:	88~108MHz
Usable Sensitivity	:	2.2μV (IHF)
IF Stages	:	2 Mechanical Filters
Image Rejection	:	55dB
T.H.D. (at 400Hz, 100% Mod.)	:	0.5% (MONO) 0.8% (STEREO)
IF Rejection	:	80dB
Capture Ratio	:	2.5dB
Selectivity	:	50dB
Signal to Noise Ratio	:	60dB
AM Suppression	:	50dB
Stereo Separation	:	33dB
Sub Carrier Suppression	:	45dB
SCA Carrier Suppression	:	50dB

MW TUNER SECTION

Tuning Range	:	525kHz~1605kHz
Usable Sensitivity	:	30μV, 200μV/m
Image Rejection	:	45dB
IF Rejection	:	50dB
Selectivity	:	30dB
Antenna	:	Built-in Ferrite Core Antenna

LW TUNER SECTION

Tuning Range	:	150kHz~390kHz
Usable Sensitivity	:	50μV
Image Rejection	:	35dB
IF Rejection	:	35dB
Selectivity :	:	30dB
Antenna	:	Built-in Ferrite Core Antenna
Power Consumption	:	182W

VICTOR COMPANY OF JAPAN, LIMITED.

KNOB POSITION

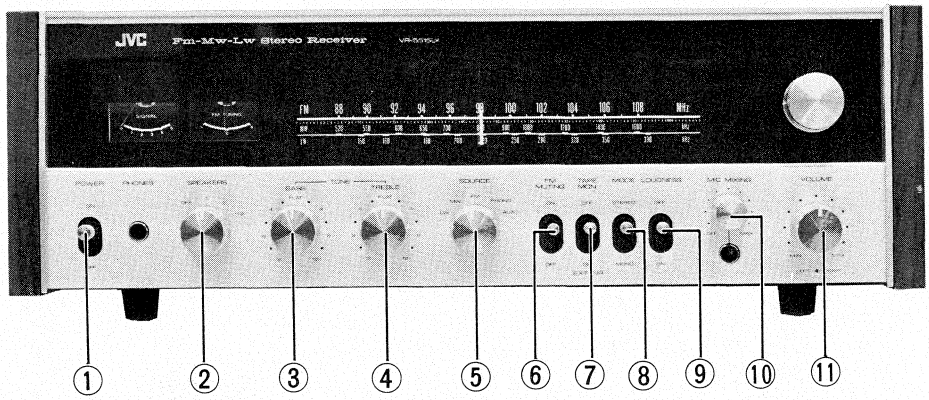
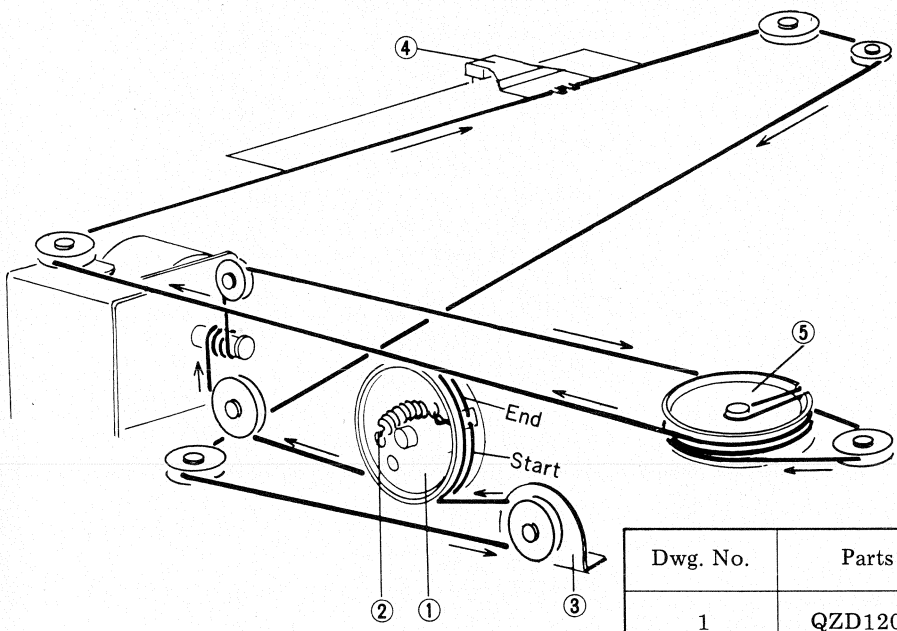


Fig. 1

Dwg. No.	Position	Knob Name	Dwg. No.	Position	Knob Name
1	OFF	POWER SWITCH	7	OFF	TAPE MON.
2	1	SPEAKERS	8	STEREO	MODE
3	FLAT	BASS	9	OFF	LOUDNESS
4	FLAT	TREBLE	10	OFF	MIC MIXING
5	FM	SOURCE	11	MIN	VOLUME
6	ON	FM MUTING			

HOW TO FIT THE DIAL CORD

1. Set the variable capacitor on maximum capacity.
2. Be sure dial drum is firmly fixed to the shaft.
3. Fit the dial cord in accordance with arrow marks.
4. Wind the cord around the tuning shaft 4 turns and two dial drum 3 turns.
5. Place the pointer on the rail and fix to the dial cord.



Dwg. No.	Parts No.	Parts Name
1	QZD1205-002	Dial Drum (FM, MW)
2	E45679-001	Spring
3	E48597-002	Tension Control
4	E33502-002	Needle Pointer
5	E33636-001	Dial Drum (LW)

REMOVAL OF THE TOP COVER AND BOTTOM PLATE

1. Remove 4 screws through the both sides of the top cover.
2. Remove the top cover
3. Remove screws from bottom plate and remove the bottom plate from the chassis.

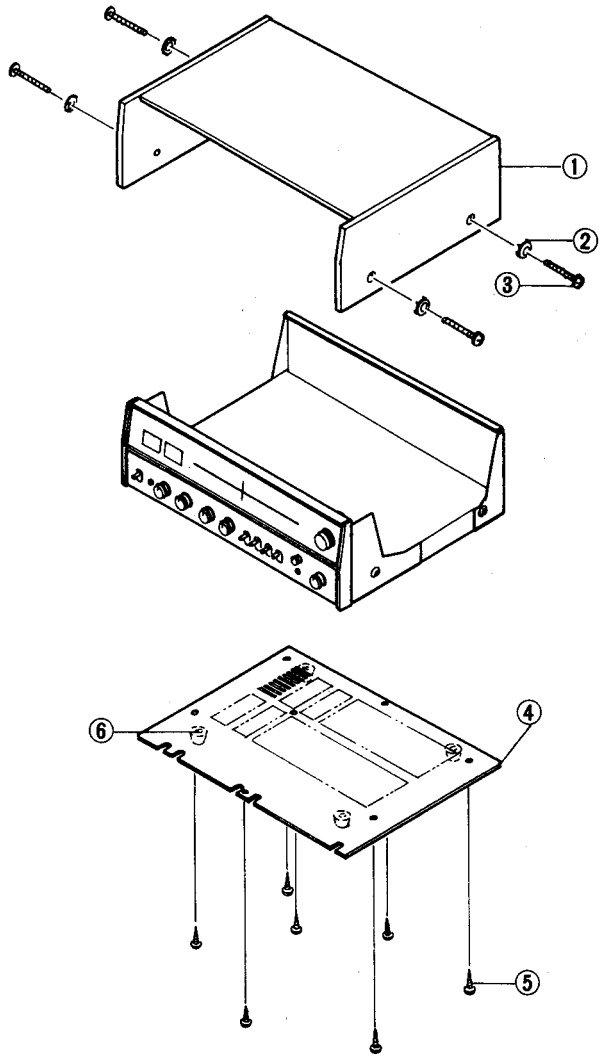


Fig. 3

Dwg. No.	Parts No.	Parts Name	Qty
1	ED92414	Wood Case (Walnut)	1
	ED92413	Wood Case (Rose-wood)	1
2	E48193-002	Washer	4
3	SDSP4025MS	Screw	4
4	E21415-005	Bottom Plate	1
5	SBSB3008N	Tapping Screw	7
6	E48599-001	Foot	4

TRANSISTOR LEADS

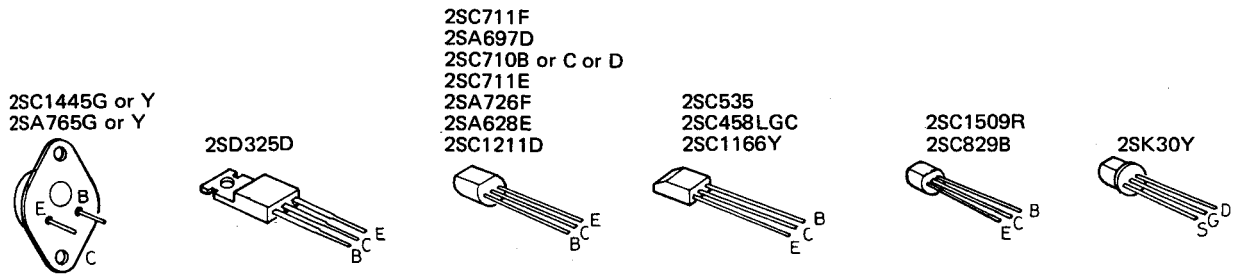


Fig. 4

MAIN PARTS ARRANGEMENT

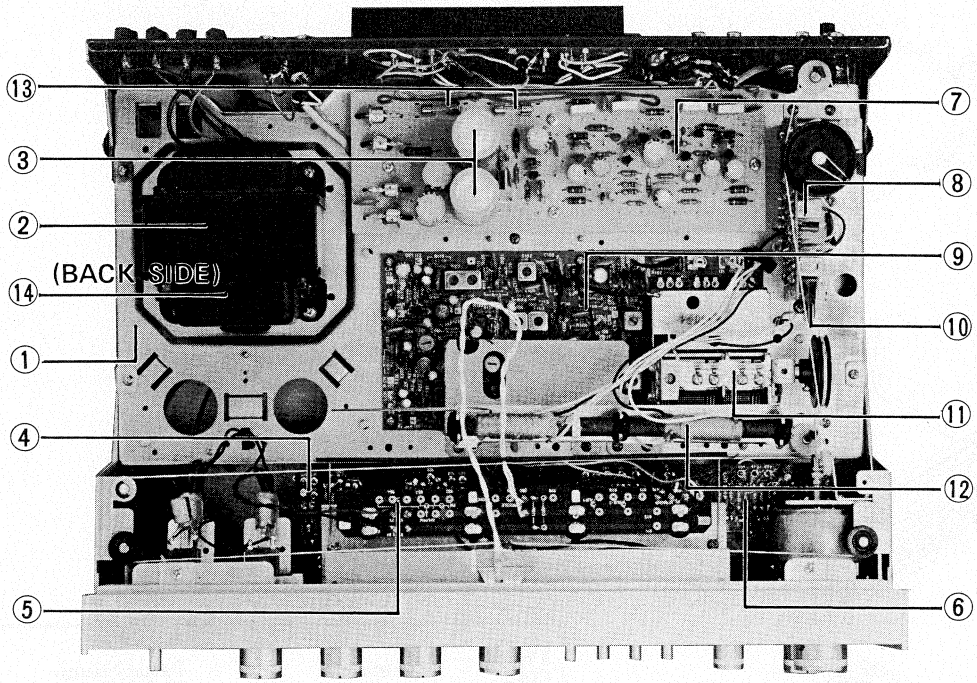


Fig. 5

Dwg. No.	Parts No.	Parts Name
1	E1793-003	Chassis Base
2	E03098-22CN	Power Transformer
3	QEY3512-121	Electrolytic Capacitor
4	TAC-359	Tone Control Amp. Circuit Board Ass'y
5	TAP-213	Scale Lamp Circuit Board Ass'y
6	TAE-96	EQ-Mic Amp. Circuit Board Ass'y
7	TAD-154	Driver-Power Supply Circuit Board Ass'y
8	TRF-29	LW Front-End Ass'y
9	TFM-208GUA2	Tuner Circuit Board Ass'y
10	E48597-002	Tension Control Ass'y
11	E03546-002	FM Front-End Ass'y
12	E03145-026	Bar Antenna Ass'y
13	QMF51A2-3R1	Protector Fuse
	QMF60S1-3R3	Protector Fuse (except SEMKO, SEV)
14	TAP-214	Circuit Board Ass'y (for SEMKO & SEV only)

TUNER ALIGNMENT

BEFORE ALIGNMENT

1. Tuning dial is set to the proper point corresponding to no radio station.
2. Connecting the RF generator to antenna terminal through the dummy antenna, refer to figure.
3. Use the insulated screw-driver adjusting the IFT.

STANDARD DUMMY ANTENNA

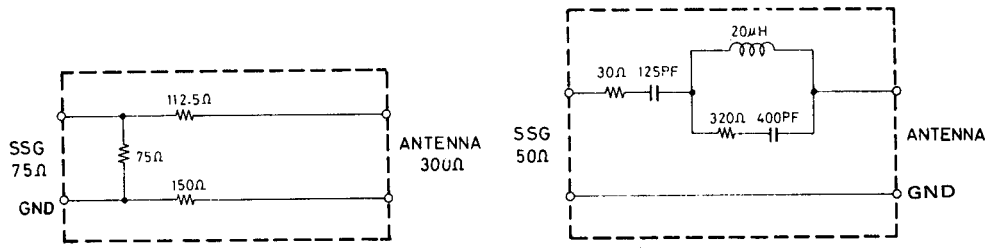


Fig. 6

MW ALIGNMENT

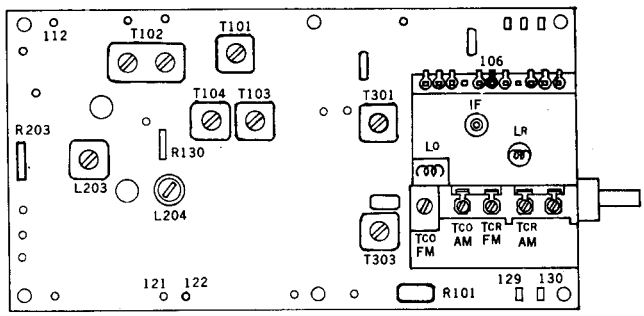


Fig. 7

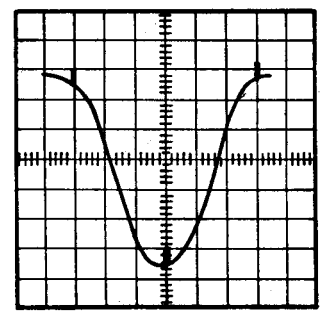


Fig. 8

ADJUSTING IF STAGE

1. Connect the output of sweep generator set to 455kHz to the AM INPUT (TAB-129) of Tuner Circuit Board Ass'y (TFM-208).
2. Connect the input of sweep generator to the (TAB-121).
3. Adjust the core of I.F.T. T301 so that output is at max and symmetry as figure figure 8.

ADJUSTING TRACKING & SENSITIVITY

LOW FREQUENCY

1. Connect the RF generator set to 600kHz modulation of 30% at 400Hz to the antenna terminal of the rear panel.
2. Connect VTVM to REC jack or speaker terminal.
3. Set dial pointer to 600kHz on the dial calibrations.
4. Adjust the OSC-trans T303 and ferrite bar antenna so that output is at max.

HIGH FREQUENCY

1. Connect RF generator set to 1400kHz modulation of 30% at 400Hz to antenna terminal of the rear panel.
2. Connect VTVM to REC jack or speaker terminal.
3. Set dial pointer to 1400kHz on dial calibrations.
4. Adjust trimmer TCO AM and TCR AM of FRONT END so that output is at max.

LW ALIGNMENT

1. Connect the output of sweep generator set to 455kHz to the AM INPUT (TAB-807) of LW Front End Circuit Board Ass'y (TRF-29).
2. Connect the input of sweep generator to the AM OUTPUT (TAB-121) of Tuner Circuit Board Ass'y (TFM-208).
3. Adjust the core of I.F.T. T301 and T801 so that output is at max and symmetry as figure figure 10.

ADJUSTING TRACKING & SENSITIVITY

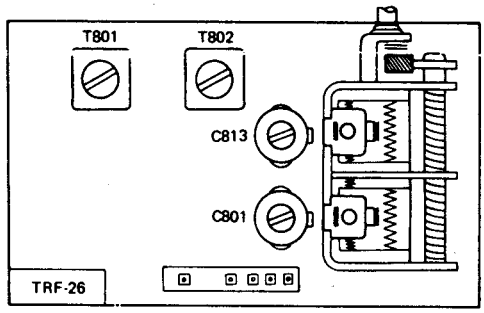


Fig. 9

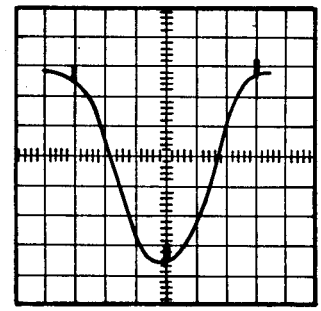


Fig. 10

LOW FREQUENCY

1. Connect the RF generator set to 160kHz modulation of 30% at 400Hz to the antenna terminal of the rear panel.
2. Connect VTVM to REC jack or speaker terminal.
3. Set dial pointer to 160kHz on the dial calibrations.
4. Adjust the OSC-trans T802 and ferrite bar antenna so that output is at max.

HIGH FREQUENCY

1. Connect RF generator set to 350kHz modulation of 30% at 400Hz to antenna terminal of the rear panel.
2. Connect VTVM to REC jack or speaker terminal.
3. Set dial pointer to 350kHz on dial calibrations.
4. Adjust trimmer C801 and C813 of TRF-29 so that output is at max.

FM ALIGNMENT

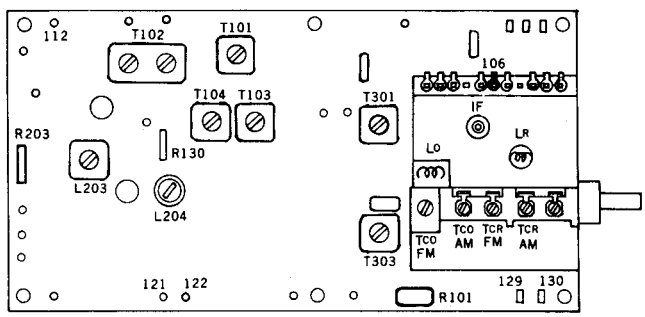


Fig. 11

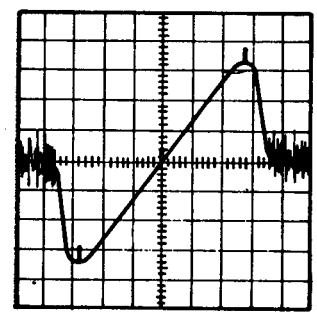


Fig. 12

ADJUSTING DISCRIMINATOR

1. Connect sweep generator set to 10.7MHz to FM test point (TP-106) through resistor 33kΩ.
2. Connect oscilloscope to the FM DET OUT (TAB-112).
3. Adjust T101, T102 so that wave form to be "S" curve as figure of right and to be maximum gain.

ADJUSTING CENTER METER & DISTORTION

1. Connect RF generator the modulation of 400Hz, the deviation of 75kHz to the antenna terminal of the rear panel through the dummy antenna.
2. Connect the oscilloscope and distortion meter to REC jack or speaker terminal.
3. Set the dial pointer position so as not to be tuned.
4. Adjust the secondary to T102 so that the Center Meter indicates just "Zero".
5. Set the generator to 98MHz and output 60dB.
6. Set the dial pointer 98MHz just tuned.
7. Adjust the primary core of T102 so that distortion is at minimum, less than 0.5%.

ADJUSTING TRACKING AND SENSITIVITY

LOW FREQUENCY

1. Connect RF generator to the antenna terminal of the rear panel through dummy antenna.
2. Set RF generator to 88MHz the modulation of 400Hz, the deviation of 75kHz and input 10μV.
3. Connect VTVM and oscilloscope to REC jack or speaker terminal.
4. Set dial pointer to 88MHz on dial calibrations.
5. Adjust coil LO (FM) and LR (FM) of Front-end so that output is at max.

HIGH FREQUENCY

1. Set RF generator to 108MHz, the modulation of 400Hz, the deviation of 75kHz and the input of 10μV.
2. Set dial pointer to 108MHz on dial calibrations.
3. Adjust trimmer TCO FM, TCR FM and TCA FM of Front-end so that output is at max.

ADJUSTING MUTING LEVEL

1. Connect VTVM and oscilloscope to REC jack or speaker terminal.
2. Set RF generator to 98MHz modulation of 400Hz, deviation of 75kHz and the input at 10μV.
3. Switch the source select to FM.
4. Turn R130 clockwise so that muting does not operate and memorize output level.
5. Turn R130 counter-clockwise slightly so that output level drops down by 1dB.
6. Reset RF generator output to 24dB and be sure muting operates.

ADJUSTING OF MPX

1. Set stereo signal modulator to the following
   Modulation → 1000Hz
   Deviation Pilot only → 7.5kHz
   MAIN & SUB → 67.5kHz
   Output → EXT jack of RF signal generator
2. Connect RF generator to the antenna terminal of the rear panel through dummy antenna.
3. Connect VTVM, Oscilloscope and distortion meter to REC jack or speaker terminal.
4. Set RF generator to 98MHz, and the input 60dB (1mV).
5. Set dial pointer to 98MHz on dial calibrations.
6. Connect oscilloscope to C205.
7. Adjust L203 blue core so that 19kHz level is at max.
8. Set stereo modulator and pilot.
9. Adjust L204 yellow core so that L-channel or R-channel output is at maximum gain and at minimum destortion.

ADJUSTING SEPARATION

10. Switch selector of stereo modulator to LEFT.
11. Adjust R203 so that RIGHT channel output is at min.
12. Switch selector of stereo modulator to RIGHT.
13. Adjust R203 so that RIGHT channel output is at min.
14. In case of difference between right and left, set R203 to average.

AUDIO ALIGNMENT

ADJUSTING IDLING CURRENT

ADJUSTING WITH AMMETER

1. Connect DC ammeter to collector of power transistor X1 and +B.
2. Adjust R619 semi fixed volume so that ammeter reading is 20mA.
3. Repeat same procedure as another channel.

ADJUSTING WITH MILIVOLTMETER

1. Connect DC milivoltmeter to both end of emitter resistor R629, that is to connect milivoltmeter to the Test point (609) of TAD-154 and speaker terminal corresponding to it.
2. Adjust R619 semi fixed volume so that milivoltmeter reading is 4mV.
3. Repeat same procedure as another channel.

   Note: When you do it set volume to minimum and take loads away from speaker terminal.

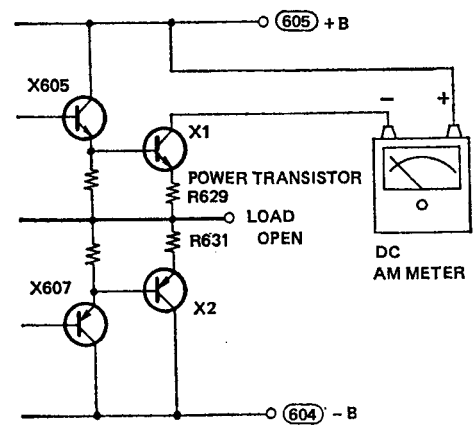


Fig. 13

THE LIST OF FRONT PANEL PARTS FOR REPLACEMENT

Dwg. No.	Parts No.	Parts Name	Description	Qty
1	E1791-004	Front Panel Ass'y		1
2	SSSB3008N	Tapping Screw		4
3a	E48602-001	Double Knob	L	1
3b	E48603-001	Double Knob	R	1
4	E48600-001	Tuning Knob		1
5	E48601-001	Volume Knob	MIC	1
6	E48753-001	Select Knob	SPK, Bass, Treble, Source	4
7	E48729-001	Plastic Rivet		4
8	E33586-002	Dial Scale		1
9	E33511-003	Color Screen		1
10	E1792-001	Front Bracket Ass'y		1
11	SSSB3008N	Tapping Screw		2
12	QSU1221-001	Lever Switch		1
	QSY2220-004	Lever Switch	for SEV, SEMKO	
13	E45979-010	Spacer		2
14	E48586-001	Reflector	FM Stereo	1
15	E48587-002	Mini Screen	Red	1
16	QLP3104-101	Lamp Ass'y	6V 35mA	1
17	E45979-013	Spacer		4
18	E03176-011B	Tuning Indicator	Signal Meter	1
19	E03176-010	Center Meter	FM Tuning Meter	1
20	E48950-001	Meter Holder		1
21	QLP1001-009	Pilot Lamp	8V 300mA	2
22	QLS1000-001	Lamp Socket		2
23	E03468-002	Jack Ass'y	Phones	1
24	QSR0060-001	Rotary Switch	Speaker (S7)	1
25	E48887-001	Spacer		1
26	E33502-002	Needle Ass'y	6V 65mA Lamp	1
27	E03457-001	Rotary Switch	Source S6	1
28	E48902-003	Mic Bracket		1
29	E48903-002	Lever Switch Holder		1
30	QSL2235-008	Lever Switch	S2 S3 S4 S5	4
31	QVF1A2B-015	Variable Resistor	100k(B) (Mic) R10	1
32	E03468-003	Jack Ass'y	Mic	1
33	E32704-004	Tuning Shaft Ass'y		1
34	E48937-002	Rollar Bracket Ass'y	Tuning Bracket	1
35	E48985-001	Rollar Bracket Ass'y	Tuning Bracket	1
36	QVC3A2A-315	Variable Resistor		2
37	TAC-359	Tone Control Circuit Board Ass'y		1 set
38	E48904-001	Equalizer Circuit Board Bracket		1
39	QVE5A3B-515	Variable Resistor	R455, R456	1
40	TAE-96	Equalizer, Mic Circuit Board Ass'y		1 set
41	E33590-001	Reflector		1
42	E33637-001	Wire Guide		1
43	QLP1001-009	Pilot Lamp	8V 300mA	4
44	TAP-213	Lamp Circuit Board Ass'y		1 set
45	50689	Lamp Socket		4
46	E33584-005	Window Screen		1

EXPLODED VIEW OF FRONT PANEL PARTS

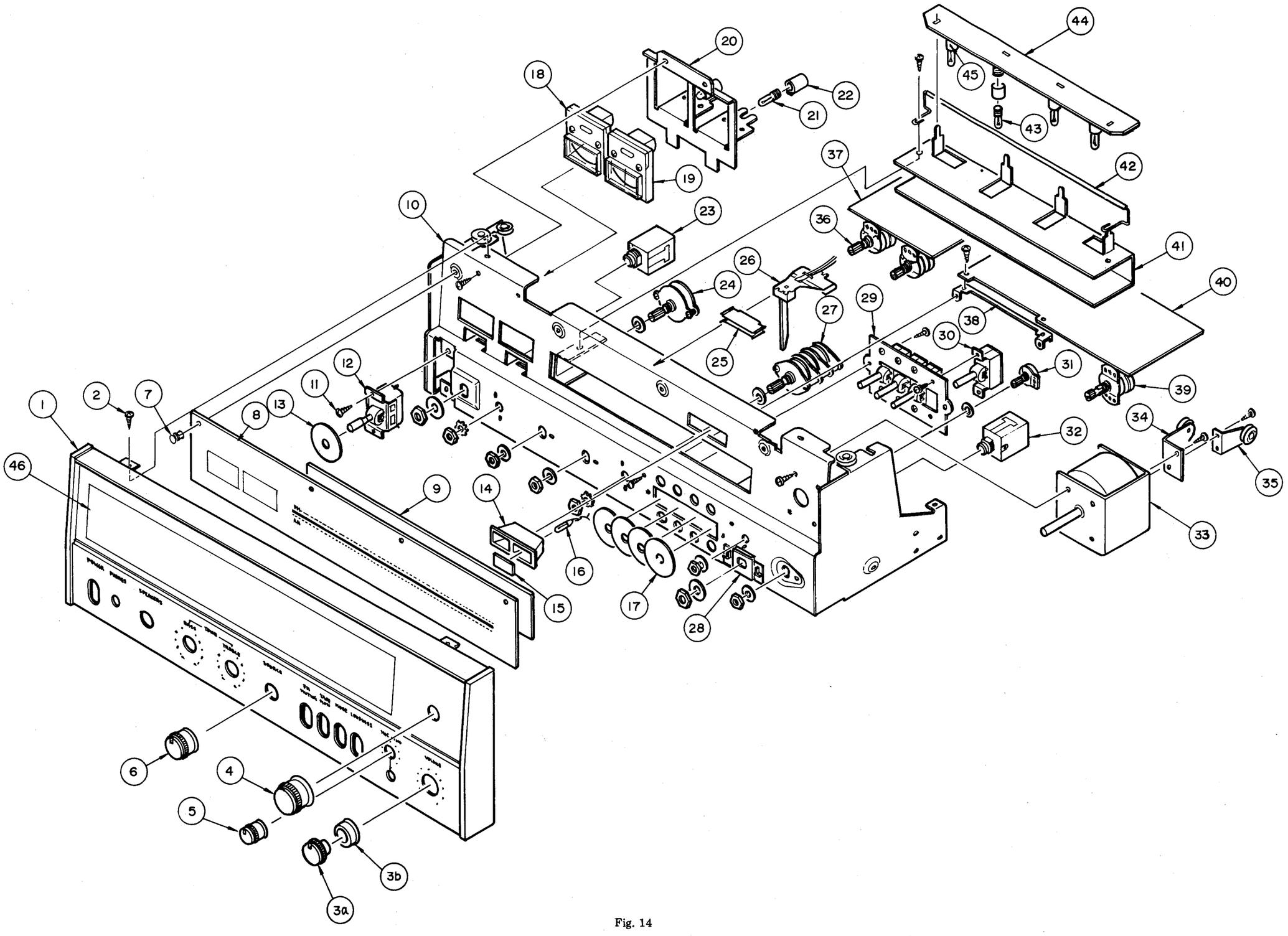


Fig. 14

EXPLODED VIEW OF REAR PANEL PARTS

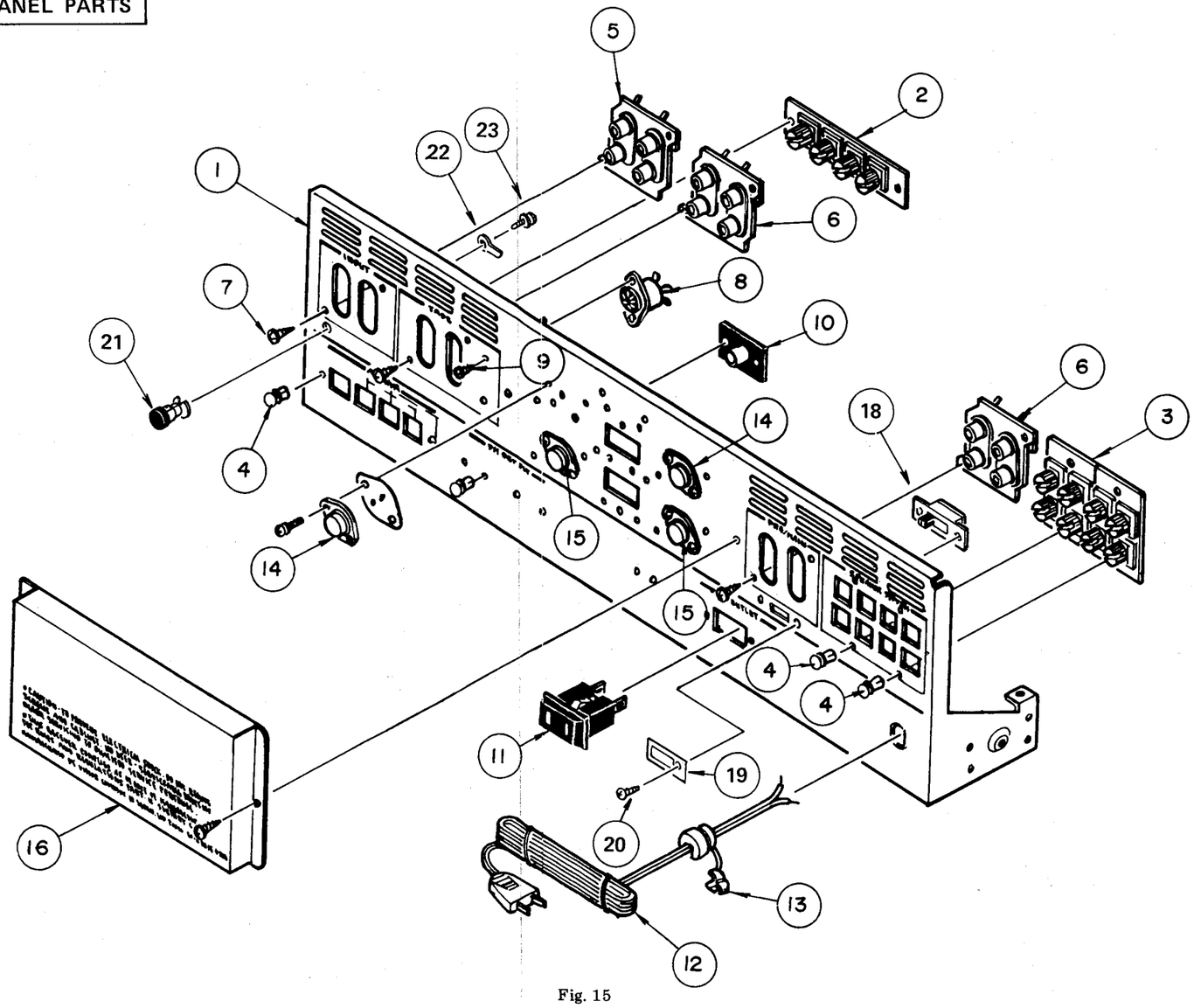


Fig. 15

Dwg. No.	Parts No.	Parts Name	Description	Qty
1	E21414-003	Rear Panel		1
2	E03572-002	Terminal Ass'y	4P Antenna	1
3	E03572-003	Terminal Ass'y	4P Speaker	2
4	E48729-001	Plastic Rivet		6
5	E03591-40	PIN Jack Ass'y	4P Phono, AUX	1
6	E03591-41	PIN Jack Ass'y	4P Tape, Pre-Main	2
7	SPSD3008MS	Self Tapping Screw	Black	6
8	E03571-001	DIN Socket Ass'y		1
9	SPSP2605M	Screw		2
10	E03043-10	PIN Jack Ass'y	1P FM DET OUT	1
11	QMC0235-001	AC Socket		1
	E48942-001	Plate	for SEMKO SEV	1
12	QMP1200-244	Power Cord with Plug	UL	1
	E03551-002	Power Cord with Plug	for U.K.	1

Dwg. No.	Parts No.	Parts Name	Description	Qty
	E03544-001	Power Cord with Plug	for SEMKO	1
	QMP3800-240	Power Cord with Plug	for SEV	1
	E03329-001	Power Cord with Plug	Expect SEMKO SEV and U.K.	1
13	E31704-003	Power Cord Stopper	UL, SEMKO and SEV.	1
	E31704-002	Power Cord Stopper	for U.K.	1
14	2SC1445G or Y	Power Transistor	X1,2	2
15	2SA765G or Y	Power Transistor	X3,4	2
16	E33588-001	TR Cover		1
18	QSS0021-002	Slide Switch	Pre-Out, Main-In	1
19	E48783-001	Stopper		1
20	SPSP2006M	Screw		2
21	E04069S	Push Terminal	Ground	1
22	52868-3	Lug		1
23	LPSP3006NS	Screw		1

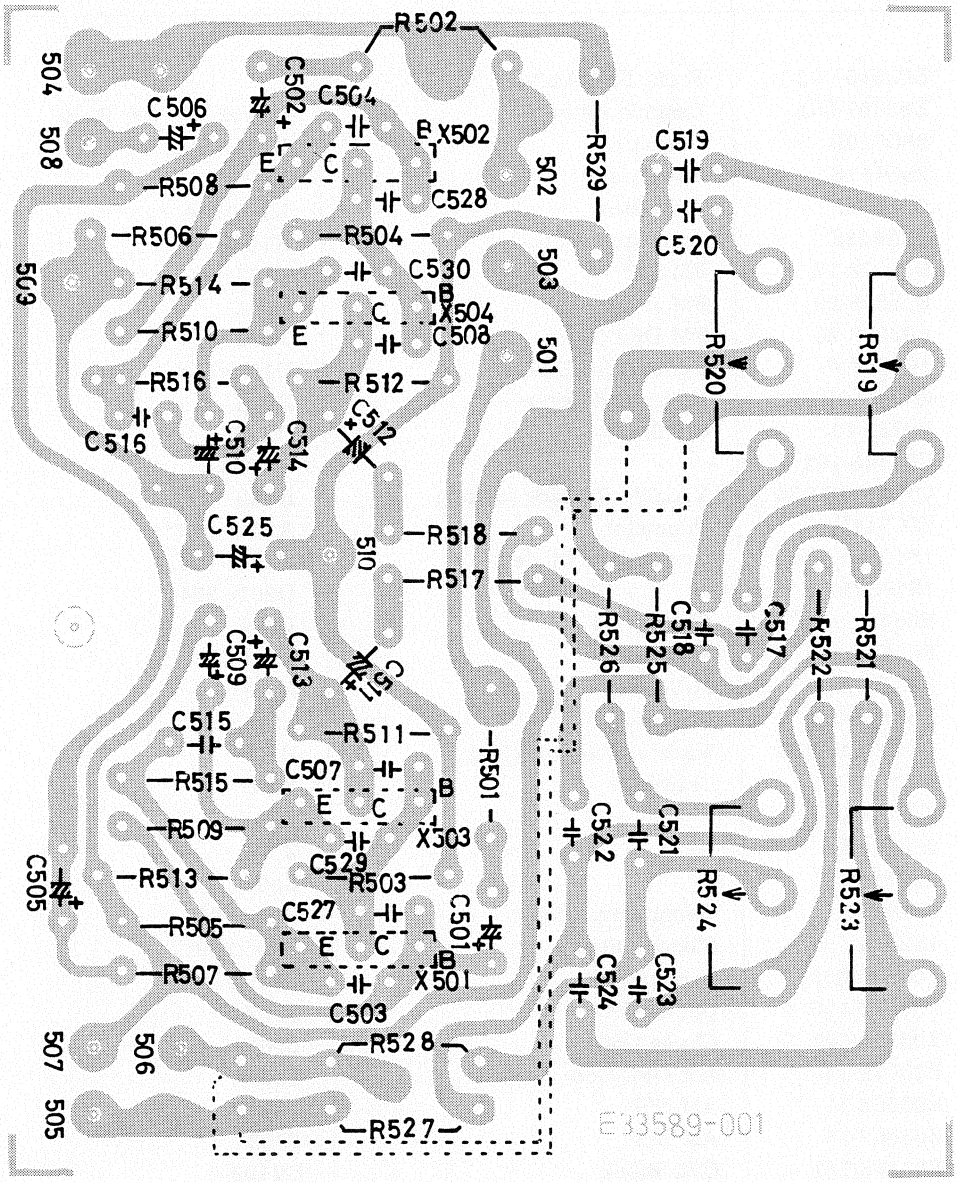


Fig. 16

TAC-359 (TONE CONTROL) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	QVC3A2A-315	Variable Resistor	R519,520,523,524	2
3	2SC458LGC	Silicon Transistor	X501~504	4
4	QEW41EA-106	Electrolytic Capacitor	C511~514	4
5	QEW41HA-105	"	C501,502 (1μ/50V)	2
6	QEW41EA-107	"	C525 (100μ/25V)	1
7	QEW41CA-106	"	C506 (10μ/16V)	1
8	QEW41AA-336	"	C509,510 (33μ/10V)	2
9	QCS11HJ-220	Ceramic Capacitor	C507,508	2
10	QCS11HJ-560	"	C515,516	2
11	QCS11HJ-361	"	C503,504	2
12	QFM41HK-122	Mylar Capacitor	C517,518	2
13	QFM41HK-103	"	C519,520	2
14	QFM41HK-153	"	C521,522	2
15	QFM41HK-104	"	C523,524	2

TFM-208 (TUNER) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	E03546-002	Front End Ass'y		1
3	E03357-001	Ceramic Filter	CF101,102 (W, R, B)	2
4	2SC710B	Transistor	X101~105,108	6
5	2SC711E	Transistor	X106	1
6	2SC711F	Transistor	X109,204	2
7	2SA628E	Transistor	X107	1
8	E03078-12	FM IFT	T103,104	2
9	E03078-29	FM IFT	T101	1
10	E03078-26	FM DET Trans	T102	1
11	1S188FM	Germanium Diode	D101~106	6
12	QVP1A0B-013	Variable Resistor	R203	1
13	E0752-11	CR Block	CR107	1
14	E03448-102	〃	CR105	1
15	QVP2A0B-054	Variable Resistor (50kΩ)	R130	1
16	2SC711E	Transistor	X201~203	3
17	1S426GFM	Germanium Diode	D206~209	4
18	1S188FM	〃	D201~204	4
19	E03587-103	Choke Coil	L202	1
20	E03587-333	Inductor	L201	1
21	E03117-003	MPX Coil	L203	1
22	E03177-012	MPX Coil	L204	1
23	QVP8A0B-053	Variable Resistor (5kΩ)	R101	1
24	2SC710C	Transistor	X302	1
25	2SC710D	〃	X301	1
26	2SC711E	〃	X304	1
27	2SC829B	〃	X303	1
28	1S188FM	Germanium Diode	D310~305	5
29	1S2473	Silicon Diode	D306,210	2
30	E03399-001	Ceramic Filter	CF301	1
31	E03520-120	Choke Coil	L302	1
32	E03520-391	Choke Coil	L301	1
33	E03079-13	AM OSC Coil	T303	1
34	E03062-31	AM IFT	T301	1
35	E03062-33	AM IFT	T302	1
36	E03448-181	C.R. Block	CR109	1
37	E03448-681	C.R. Block	CR108	1
38	QEW41AA-107	Electrolytic Capacitor	C112	1
39	QEW41CA-336	〃	C103	1
40	QEW41CA-106	〃	C113,114,116,310	4
41	QEW41HA-475	〃	C115,123	2
42	QEW41HA-335	〃	C153	1
43	QEW41HA-105	〃	C121	1
44	QCF11HP-102A	Ceramic Capacitor	C110	1
45	QCF11HP-223A	〃	C108,111,118,120,122	5
46	QCZ0107-473	〃	C101,102,104,105,109,151 136,138,140	9
47	QCS11HJ-4R0	Ceramic Capacitor	C117	1
48	QCS11HJ-560	〃	C106	1
49	QCS11HJ-101	〃	C119	1
50	QEW41CA-476	Electrolytic Capacitor	C212	1
51	QEW41CA-336	〃	C214	1
52	QEW41CA-106	〃	C204,210	2
53	QEW41HA-335	〃	C213	1
54	QEW41HA-105	〃	C219,220	2
55	QEB41EM-334	L.L.C Electrolytic Capacitor	C207	1
56	QCS11HJ-151	Ceramic Capacitor	C201	1

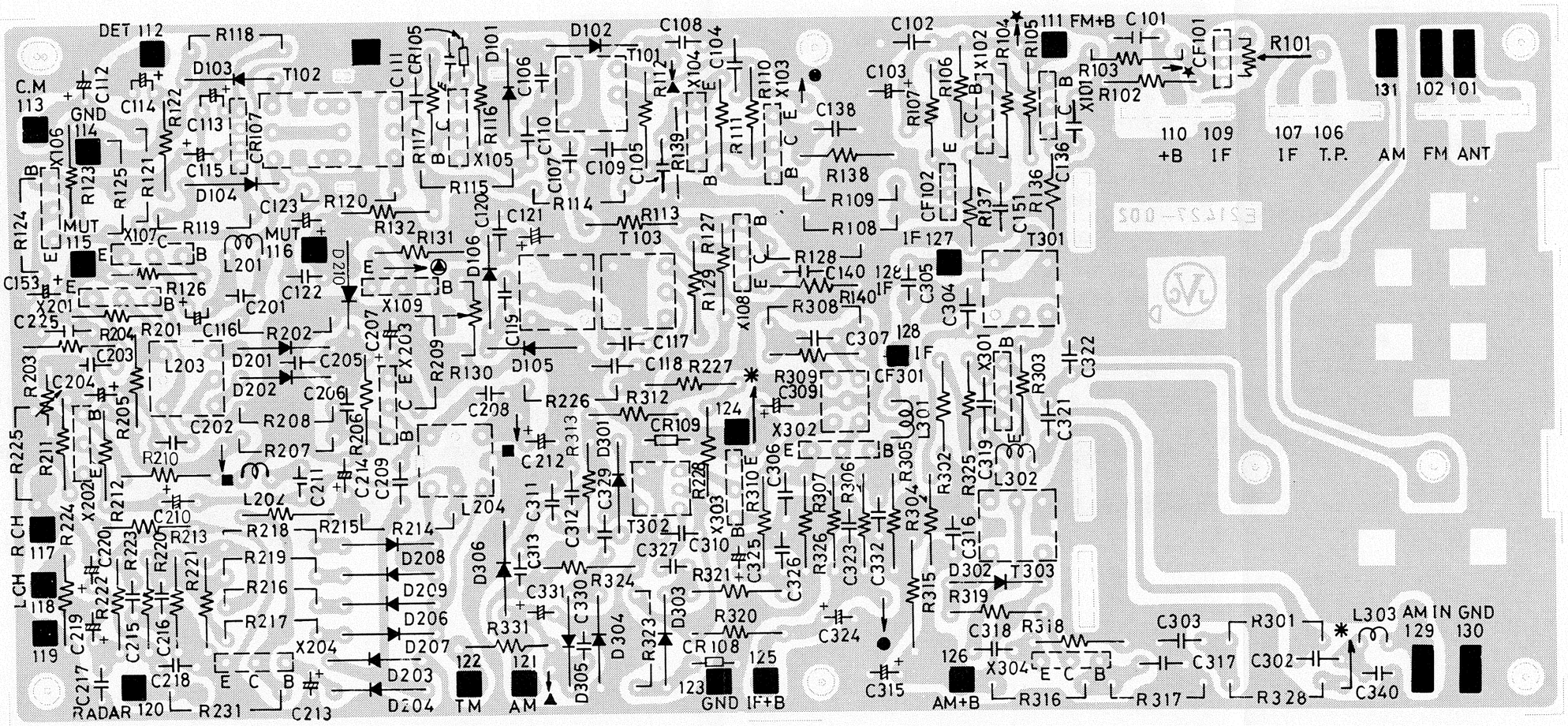


Fig. 17

TFM-208 (TUNER) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
57	QFM41HK-102	Mylar Capacitor	C205	1
58	QCS11HJ-331	Ceramic Capacitor	C209	1
59	QCZ0107-473	"	C225	1
60	QCS11HJ-391	Ceramic Capacitor	C206	1
61	QFM41HK-153	Mylar Capacitor	C203	1
62	QFM41HK-682	"	C211,215,216	3
63	QFS42BJ-272	Polystyrol Capacitor	C208	1
64	QFS42BJ-472	"	C202	1
65	QCF11HP-223A	Ceramic Capacitor	C303,304,305,316,323,326,330	7
66	QCZ0107-473	"	C302,306,317,319	4
67	QCS11HJ-150	"	C322	1
68	QCS11HJ-331	"	C332	1
69	QCS11HJ-820	"	C327	1
70	QCS11HJ-121	"	C307	1

No.	Parts No.	Parts Name	Description	Qty
71	QCS11HJ-221	Ceramic Capacitor	C329	1
72	QCS11HJ-361	"	C321	1
73	QCS11HJ-151	"	C340	1
74	QEW41AA-336	Electrolytic Capacitor	C331 (33μ/10V)	1
75	QEW41CA-336	"	C315,324 (33μ/16V)	2
76	QEW41AA-336	"	C325 (33μ/10V)	1
77	QEW40JA-227	"	C309 (220μ/6.3V)	1
78	QFM41HK-103	Mylar Capacitor	C311	1
79	QFM41HK-682	"	C318	1
80	QFM41HK-563	"	C313	1
81	QFM41HK-223	"	C312	1
82	QFM41HK-152	"	C217,218	2
83	QCS11HJ-180	Ceramic Capacitor	C107	1

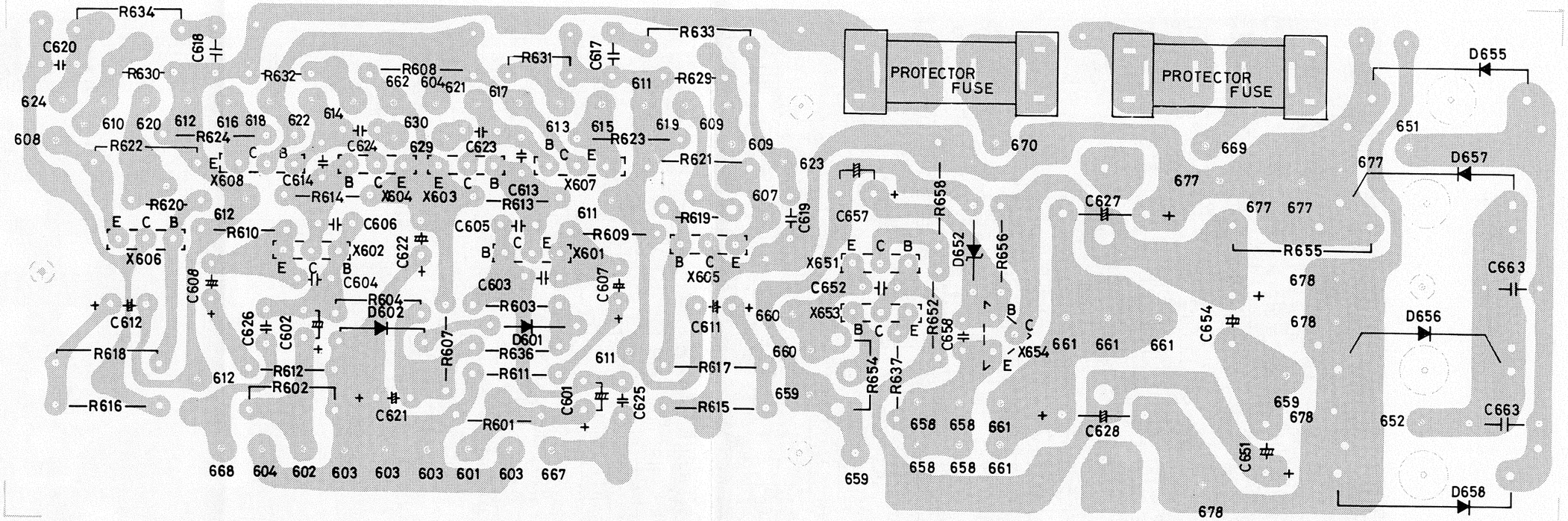


Fig. 18

TAD-154 (DRIVER POWER SUPPLY) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	2SA726F	Transistor	X601,602	2
3	2SC1211D or C	Transistor	X605,606	2
4	2SA697D or C	Transistor	X607,608	2
5	QVP2A0B-022	Variable Resistor	R619,620 (200Ω B)	2
6	2SC711F	Transistor	X653	1
7	2SC1166Y	Transistor	X651	1
8	2SD325D or E	Transistor	X654	1
9	E0771-12	Zener Diode	D652	1
10	S3	Diode	D655~658	4
11	2SC1509R or S	Transistor	X603,604	2
12	1S2473	Diode	D601,602	2
13	QRP2A0B-054	Variable Resistor	R654	1
14	QEW41HA-105	Electrolytic Capacitor	C601,602 (1μ/50V)	2
15	QEW40JA-227	Electrolytic Capacitor	C607,608,621 (220μ/6,3V)	3
16	QEW41HA-107	Electrolytic Capacitor	C622 (100μ/50V)	1
17	QEW41HA-476	Electrolytic Capacitor	C611,612 (47μ/50V)	2
19	QCS11HJ-5R0	Ceramic Capacitor	C613,614	2
20	QCS11HJ-220	Ceramic Capacitor	C605,606	2
21	QFM41HK-473	Mylar Capacitor	C617,618	2
22	QFM41HK-473	Mylar Capacitor	C623,624	2
23	QCF11HP-203	Ceramic Capacitor	C619,620	2
24	QEW41CA-477	Electrolytic Capacitor	C657 (470μ/16V)	1
25	QEW41VA-477	Electrolytic Capacitor	C654 (470μ/35V)	1
26	QCF11HP-103	Ceramic Capacitor	C652,658	2
27	QCF12HP-103	Ceramic Capacitor	C663	1
28	QEW41VA-477	Electrolytic Capacitor	C651 (470μ/35V)	1
29	QRM035K-R22	Metal Plate Resistor	R629,630,631,632	4
30	E03347-2-680	Metal Film Resistor	R655	1
31	QEW81VA-478	Electrolytic Capacitor	C627,628	2
32a	QMF60S1-3R3	Fuse	(Protector Fuse) Except SEMKO, SEV.	2
32b	QMF51A2-3R1	Fuse	(Protector Fuse) for SEMKO SEV.	

TAP-214 (FUSE) (For SEMKO. SEV)

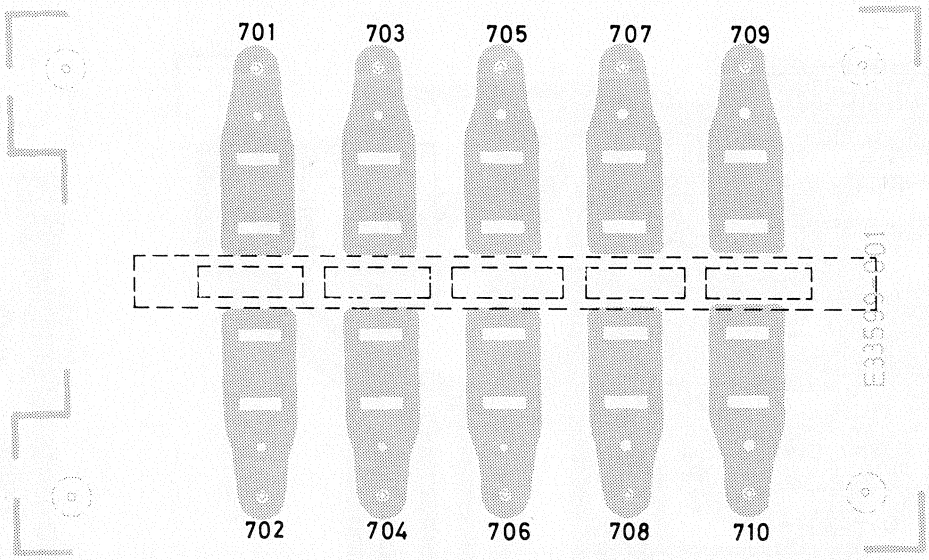


Fig. 19

TAP-214 (FUSE) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	QMF51A2-3R1	Fuse	3.15AT (AC 20V)	2
3	QMF51A2-1R6	Fuse	1.6AT (AC 6.8V)	1

TRF-27 (AM ANTENNA)

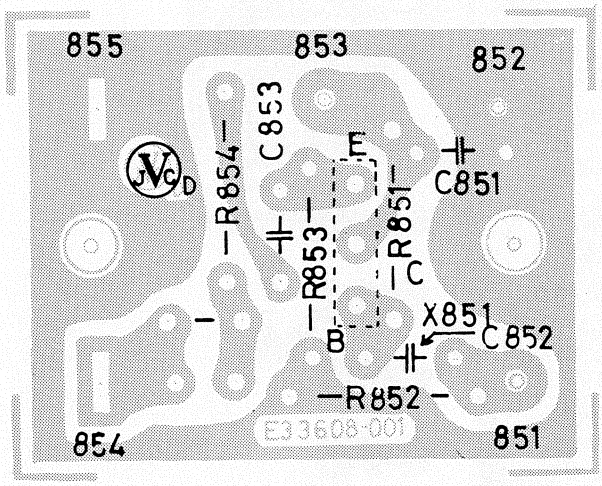


Fig. 20

TRF-27 (AM ANTENNA) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	2SC710B	Silicon Transistor	X851	1
3	QRD141J-561	Carbon Resistor	R854	1
4	QRD141J-152	Carbon Resistor	R852	1
5	QRD141J-562	Carbon Resistor	R853	1
6	QRD141J-561	Carbon Resistor	R851	1
7	QCZ0107-473	Ceramic Capacitor	C851,852,853	3

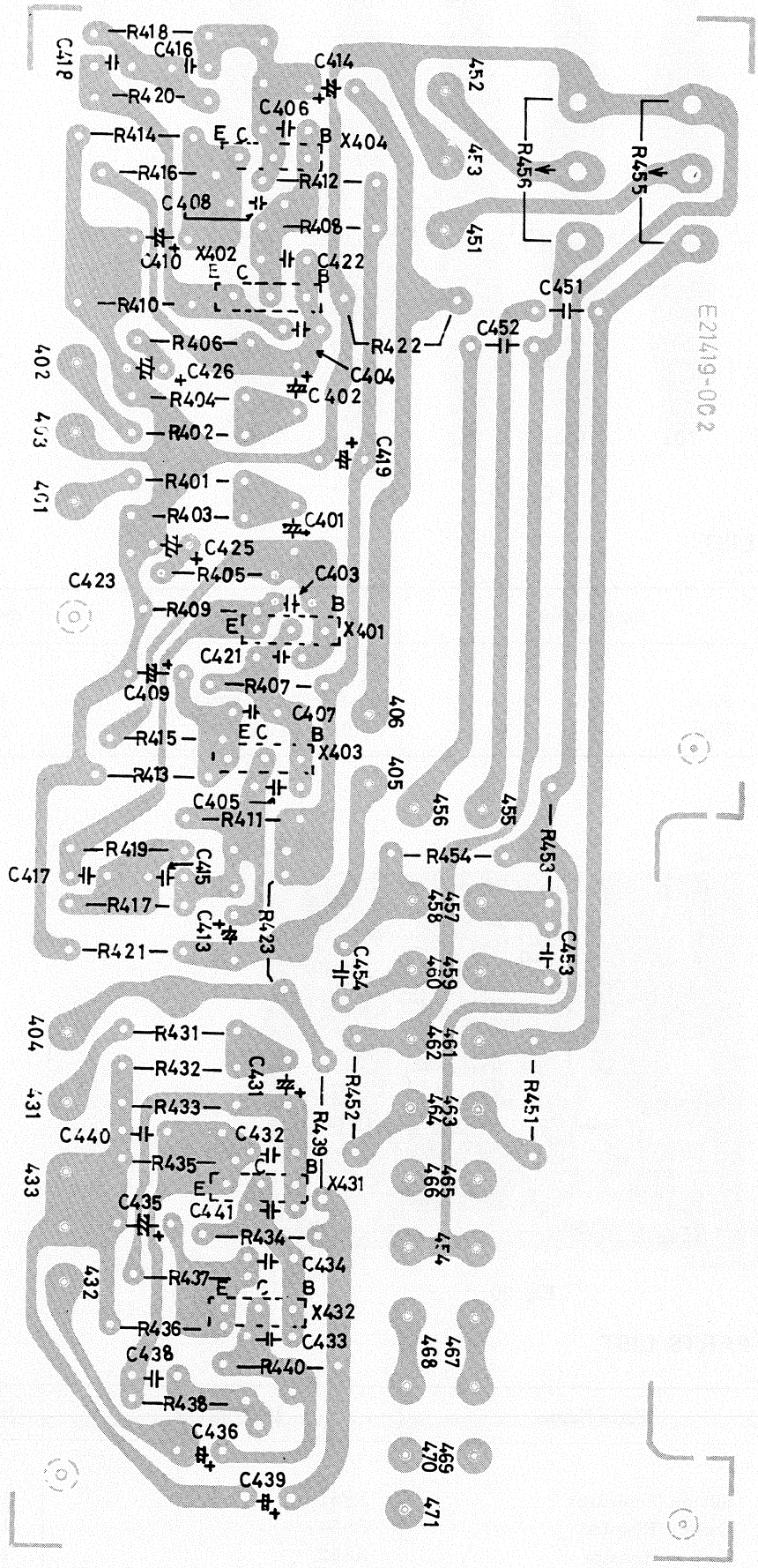

R418
C416
C414
R420
C406
R414
X404
R416
R412
C408
R408
C410
X402
C422
R410
C451
R422
C452
R406
C426
C404
C402
R404
R402
C419
R401
C401
R403
C425
R405
C403
C423
R409
X401
C421
C409
R407
C407
R415
X403
R413
C405
R411
R419
C445
C417
R454
R453
R417
C413
R423
C453
R421
C454
R431
R432
C431
R452
R451
R433
C440
C432
R439
R435
X431
C435
C441
R434
C434
R437
X432
R436
C433
C438
R440
R438
C436
C439
E2419-002

Fig. 21

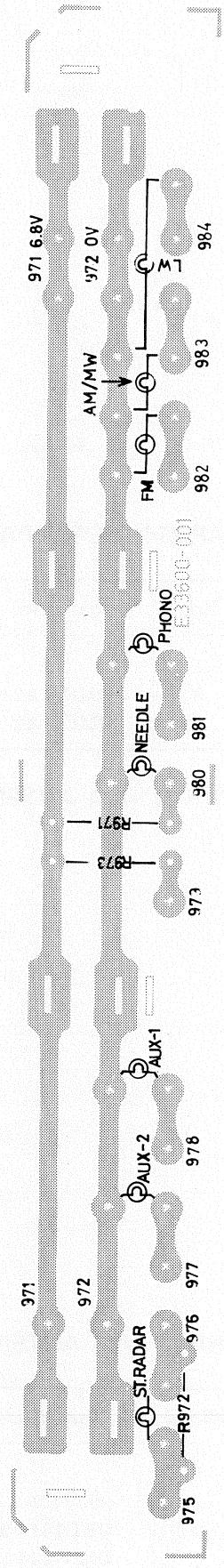

971 6.8V
972 0V
984
LW
983
AM/MW
FM
982
E3600-001
PHONO
NEEDLE
981
980
R971
R973
973
AUX-1
978
AUX-2
977
976
ST.RADAR
R972
975

Fig. 22

TAE-96 (EQ. MIC AMP.) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	QVE5A3B-515	Variable Resistor	R455,456	1
3	2SC458LGC	Transistor	X401,402,403,404,	4
4	2SC458LGC	Transistor	X431,432	2
5	QEW41HA-105	Electrolytic Capacitor	C401,402,413,414 (1μ/50V)	4
6	QEW41EA-227	Electrolytic Capacitor	C419 (220μ/25V)	1
8	QEW41CA-106	Electrolytic Capacitor	C409,410 (10μ/10V)	2
9	QFM41HJ-113	Mylar Capacitor	C415,416	2
10	QFM41HJ-332	Mylar Capacitor	C417,418	2
11	QCS11HJ-151	Ceramic Capacitor	C407,408	2
12	QCS11HJ-101	Ceramic Capacitor	C405,406	2
13	QCF11HP-102	Ceramic Capacitor	C403,404	2
14	QEW41AA-106	Electrolytic Capacitor	C425,426 (10μ/10V)	2
15	QEW41HA-105	Electrolytic Capacitor	C431,436 (1μ/50V)	2
16	QEW41EA-107	Electrolytic Capacitor	C439 (100μ/25V)	1
18	QEW41AA-336	Electrolytic Capacitor	C435 (33μ/10V)	1
19	QCS11HJ-151	Ceramic Capacitor	C434	1
20	QCS11HJ-560	Ceramic Capacitor	C433,438	2
21	QCF11HP-102	Ceramic Capacitor	C432	1
22	QCS11HJ-471	Ceramic Capacitor	C451,452	2
23	QFM41HK-333	Mylar Capacitor	C453,454	2

TAP-213 (LAMP) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1	50689	Lamp Socket		4
2	QLP1001-009	Pilot Lamp	8V 300mA	4
3	E33600-001	Circuit Board		1

TAE-96 (EQ. MIC AMP.) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	QVE5A3B-515	Variable Resistor	R455,456	1
3	2SC458LGC	Transistor	X401,402,403,404,	4
4	2SC458LGC	Transistor	X431,432	2
5	QEW41HA-105	Electrolytic Capacitor	C401,402,413,414 (1μ/50V)	4
6	QEW41EA-227	Electrolytic Capacitor	C419 (220μ/25V)	1
8	QEW41CA-106	Electrolytic Capacitor	C409,410 (10μ/10V)	2
9	QFM41HJ-113	Mylar Capacitor	C415,416	2
10	QFM41HJ-332	Mylar Capacitor	C417,418	2
11	QCS11HJ-151	Ceramic Capacitor	C407,408	2
12	QCS11HJ-101	Ceramic Capacitor	C405,406	2
13	QCF11HP-102	Ceramic Capacitor	C403,404	2
14	QEW41AA-106	Electrolytic Capacitor	C425,426 (10μ/10V)	2
15	QEW41HA-105	Electrolytic Capacitor	C431,436 (1μ/50V)	2
16	QEW41EA-107	Electrolytic Capacitor	C439 (100μ/25V)	1
18	QEW41AA-336	Electrolytic Capacitor	C435 (33μ/10V)	1
19	QCS11HJ-151	Ceramic Capacitor	C434	1
20	QCS11HJ-560	Ceramic Capacitor	C433,438	2
21	QCF11HP-102	Ceramic Capacitor	C432	1
22	QCS11HJ-471	Ceramic Capacitor	C451,452	2
23	QFM41HK-333	Mylar Capacitor	C453,454	2

TAP-213 (LAMP) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1	50689	Lamp Socket		4
2	QLP1001-009	Pilot Lamp	8V 300mA	4
3	E33600-001	Circuit Board		1

TAE-29 (LW. FRONT END)

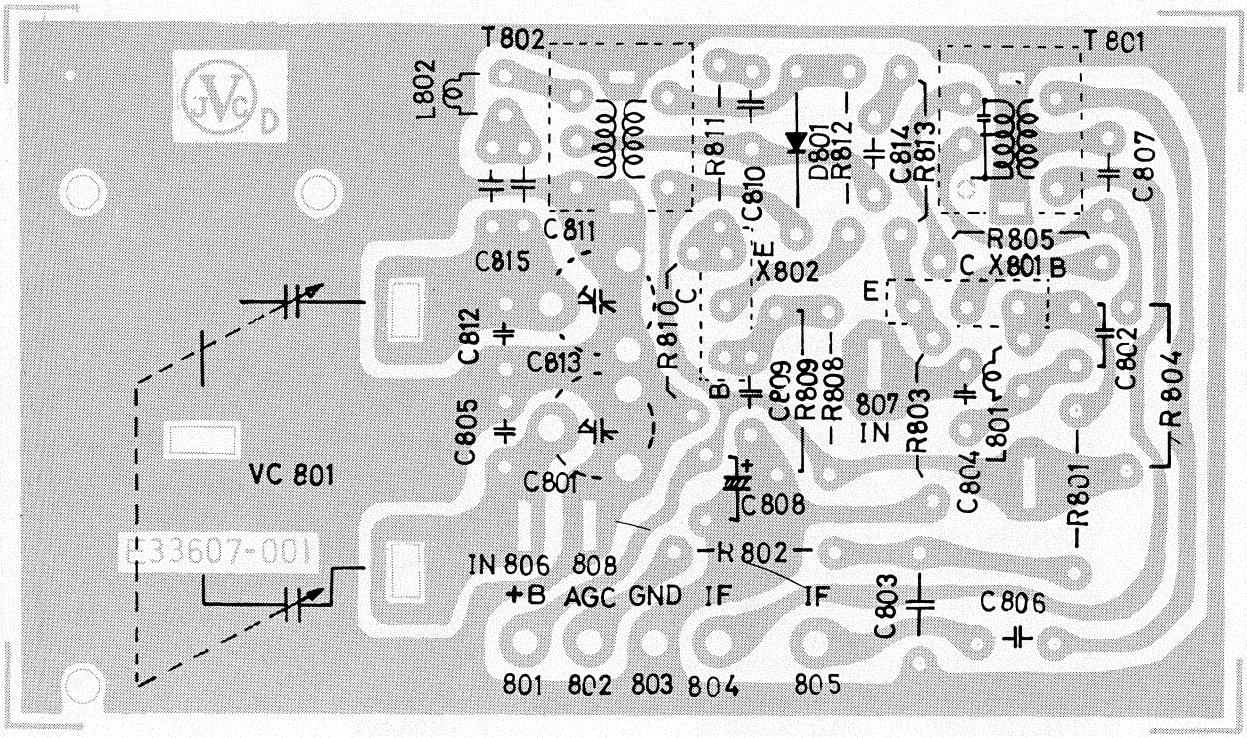


Fig. 23

TRF-26 (LW. FRONT END) PARTS LIST

No.	Parts No.	Parts Name	Description	Qty
1				
2	E03391-002	AM V. Capacitor		1
3	2SC710D	Silicon Transistor	X801	1
4	2SC711E	Silicon Transistor	X802	1
5	1S188FM	Germanium Diode	D801	1
6	E03079-18	LW OSC Coil	T802	1
7	E03062-31	AM IFT	T801	1
8	E30520-120	Choke Coil	L802	1
9	E03520-101	Choke Coil	L801	1
10	E03520-391	Choke Coil	L803	1
11	QAT3001-006	Trimmer	C801,813	2
12	QRD141J-682	Carbon Resistor	R813	1
13	QRD141J-222	"	R812	1
14	QRD141J-681	"	R805	1
15	QRD141J-102	"	R810	1
16	QRD141J-122	"	R803	1
17	QRD141J-152	"	R801,802	2
18	QRD141J-183	"	R809	1
19	QRD141J-123	"	R804	1
20	QRD141J-473	"	R808	1
21	QRD141J-0R0	Jumper Resistor	R811	1
22	QCZ0107-473	Ceramic Capacitor	C803,804,806,807,808,809,814	7
23	QFM41HK-223	Mylar Capacitor	C810	1
24	QCS11HJ-560	Ceramic Capacitor	C816	1
25	QCS11HJ-181	"	C811,802	2
26	QCS11HJ-150	"	C805	1

LEVEL DIAGRAM

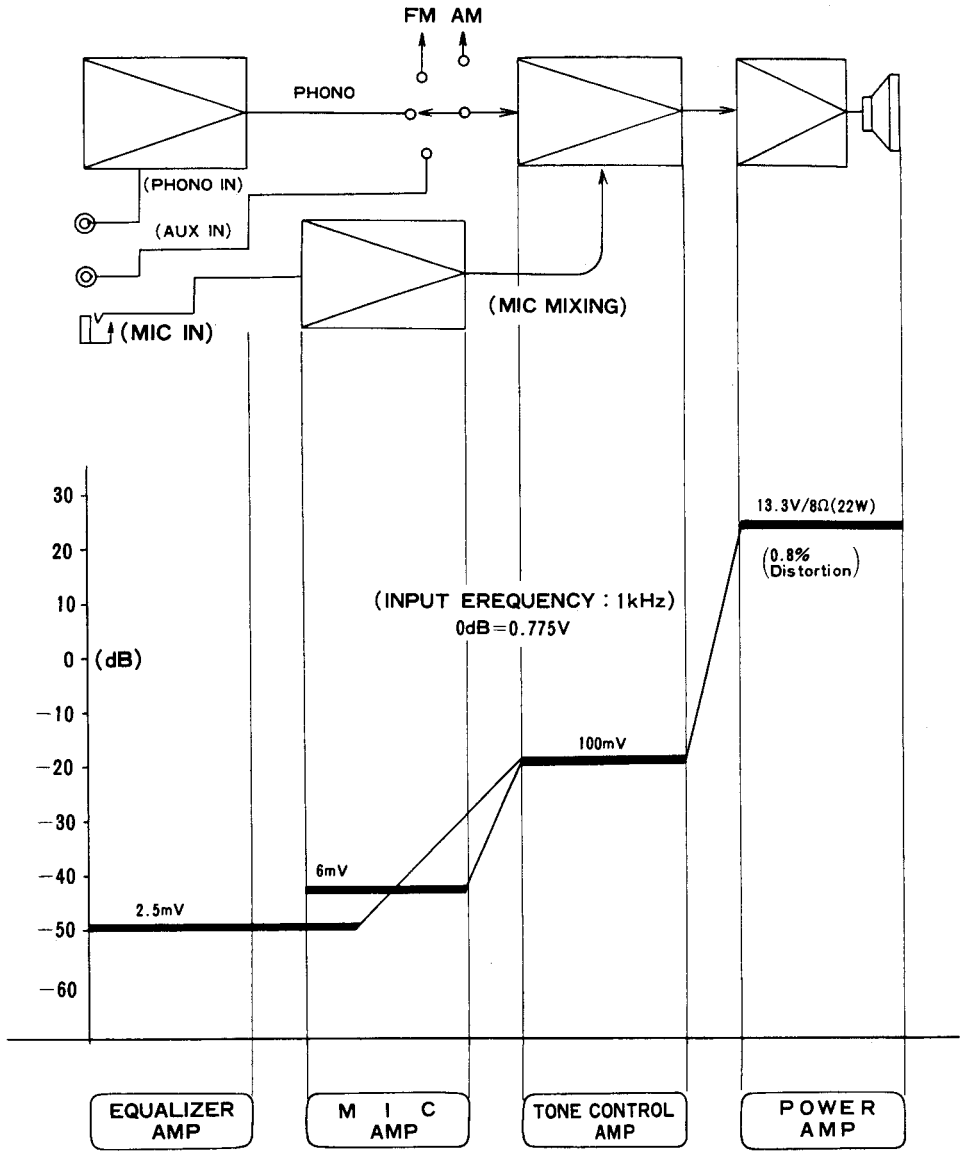
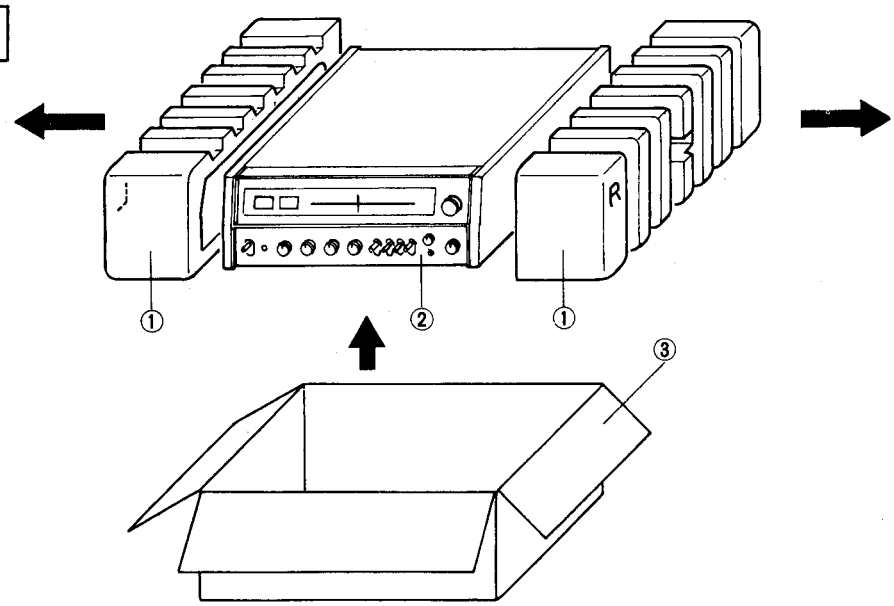


Fig. 24

PACKING ILLUSTRATION



① VR5515LX-NZ
② VR5515LX
③ VR5515LX-PK
(ENVELOPE E32332-010)

Fig. 25

ACCESSORIES

Parts Name	Parts No.
Inst Book	E30580-445A
Envelope (Inst)	E64207-002
Polishing Cloth Ass'y	E64103-001
Envelope (Set)	E32332-010
Schematic Diagram	E30539-421A

NOTE : A sort of Resistor's Parts Number shown below.

Parts No.	Sort of Resistor
QRD141J	Carbon Resistor ¼W
QRC121K	Composition Resistor ½W

When you order Resistor, write required Resistor value in addition to the right-hand of hyphen.

For example : QRD141J-102 = Carbon Resistor 1kΩ ¼W
QRD141J-472 = Carbon Resistor 4.7kΩ ¼W
QRC121K-562 = Composition Resistor 5.6kΩ ½W

MAKER'S NAME OF TRANSISTOR, IC AND DIODE

2SC1445	Transistor	Sanken
2SA765	〃	〃
2SD325	〃	Toshiba
2SC1166	〃	〃
2SA697	〃	Mitsubishi
2SC710	〃	〃
2SC711	〃	〃
2SA726	〃	〃
2SA628	〃	〃
2SC1211	〃	〃
2SC535	〃	Hitachi
2SC458	〃	〃
2SC829	〃	Matsushita
2SC1509	〃	〃

1S188	Diode	Sanyo
1S2473	〃	Toyo
S3	〃	Sanken
SV03	〃	〃
1S426	〃	Sanyo

CHECK POINT AFTER REPAIR

Please be sure of the following corresponds when repair is complete.

1. Each broadcasting frequency accords with dial scale accurately.
2. No abnormal oscillations occur in FM & AM reception.
3. Modulation hum is practically un appreciable.
4. Normal gain and output are obtained.
5. Both high and low range of audio frequency are not decreased exceptionally.
6. S. E. A. Controls operate normally: 100V
7. Normal fuse used : 100V~120V 2.3A (Except SEV. SEMKO)
   220V~240V 1.2A (〃)

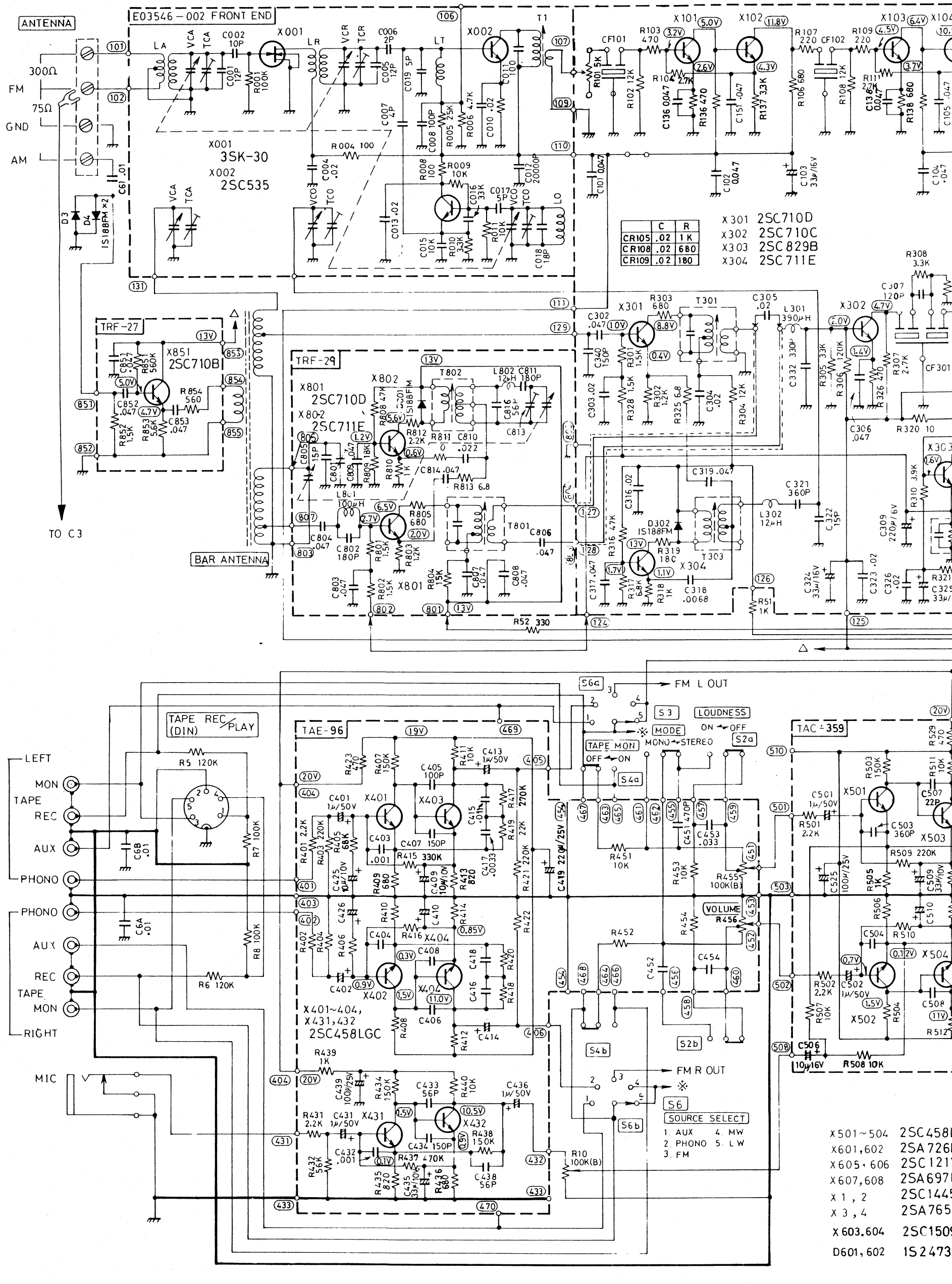
Requirement to Customers

For the purpose of prompt supply of service parts, inscribe parts number, parts name and model name correctly when you order.

If possible please give an order for spare cabinet in early oppertunity since it is very difficult to remanufacture cabinet after production of the set was discontinued.

Printed in Japan
— 4906 — O —

MODEL VR-5515LX S



ODEL VR-5515LX SCHEMATIC DIAGRAM

Note : The primary circuit is slightly differen
schematic diagrams shown on the back pa

TFM-208G UA

	C	R
CR105	.02	1K
CR108	.02	680
CR109	.02	180

X301 2SC710D
X302 2SC710C
X303 2SC829B
X304 2SC711E

X101~105 2SC710B
X106 2SC711E
X107 2SA628E
X108 2SC710B
X109 2SC711F

X201~203 2SC711E
X204 2SC711F

X501~504 2SC458LGC
X601,602 2SA726F
X605,606 2SC1211D
X607,608 2SA697D
X1, 2 2SC1445G,Y
X3, 4 2SA765G,Y
X603,604 2SC1509R,S
D601,602 1S2473

X651 2SC1166Y,653 2SC711F

TAP-654 2SD325D

SIGNAL METER

L CH
R CH

TAC-359
PRE OUT
MAIN IN
TAP-213
TAD-154
TAP-213
TO POWER TR

FM L OUT
FM R OUT
S1 NORMAL↔SEPARATE
S2a LOUDNESS ON↔OFF
S2b MODE MONO↔STEREO
S3 MON ON
S4a TREBLE BASS
S4b VOLUME R456
S5 SOURCE SELECT
1. AUX 4. MW
2. PHONO 5. LW
3. FM
S6a S6b S6c S6d S6e
SEPARATE↔NORMAL
S7a SPEAKER SELECTOR "OFF" POSITION
S7b PROTECT FUSE

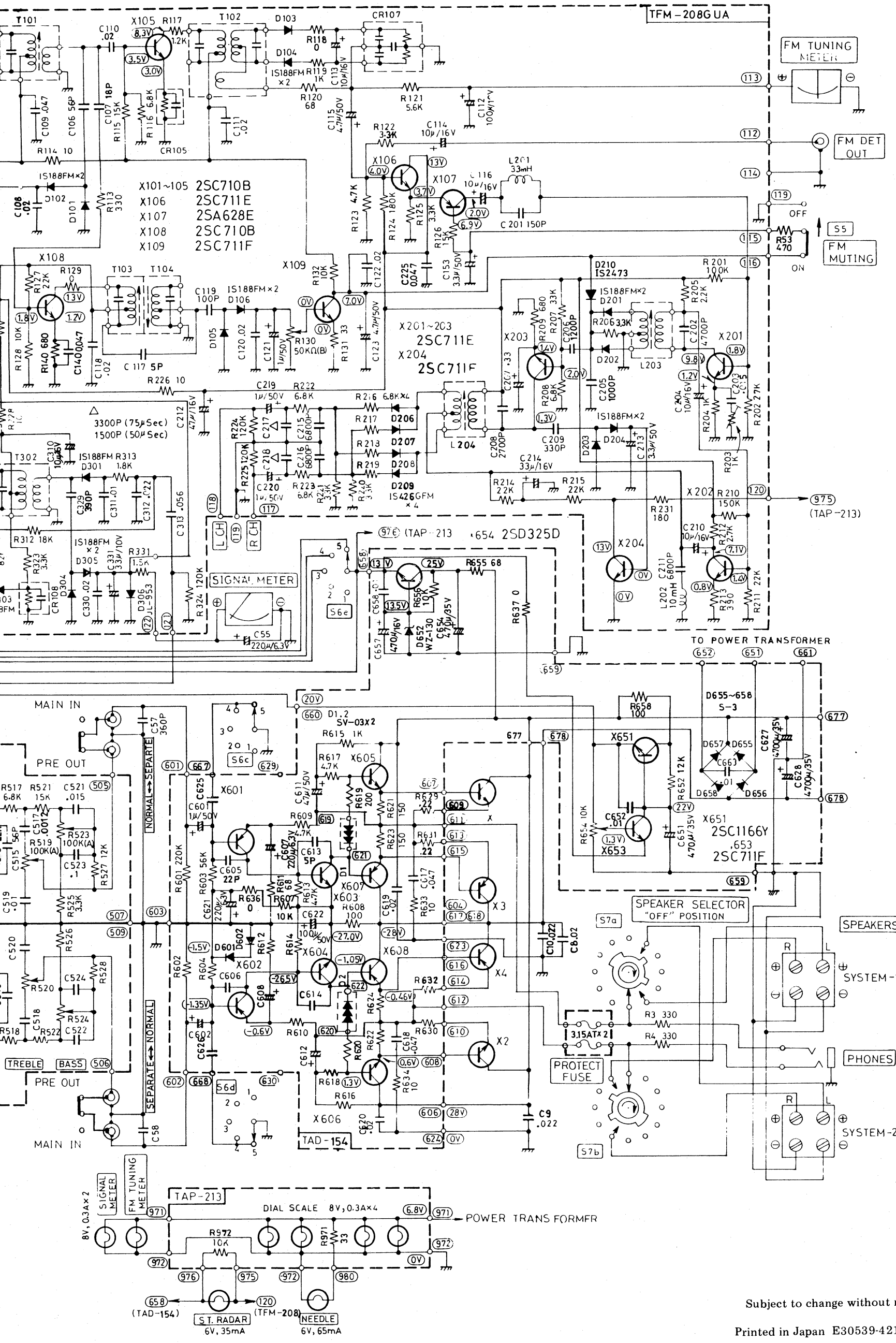
△ 3300P (75μSec)
1500P (50μSec)

DIAL SCALE 8V, 0.3A×4
POWER TRANSFORMER
SIGNAL METER
FM TUNING METER
8V, 0.3A×2
S. T. RADAR 6V, 35mA
NEEDLE 6V, 65mA

Sub
Printe

HEMATIC DIAGRAM

Note : The primary circuit is slightly different, therefore please see the schematic diagrams shown on the back page.

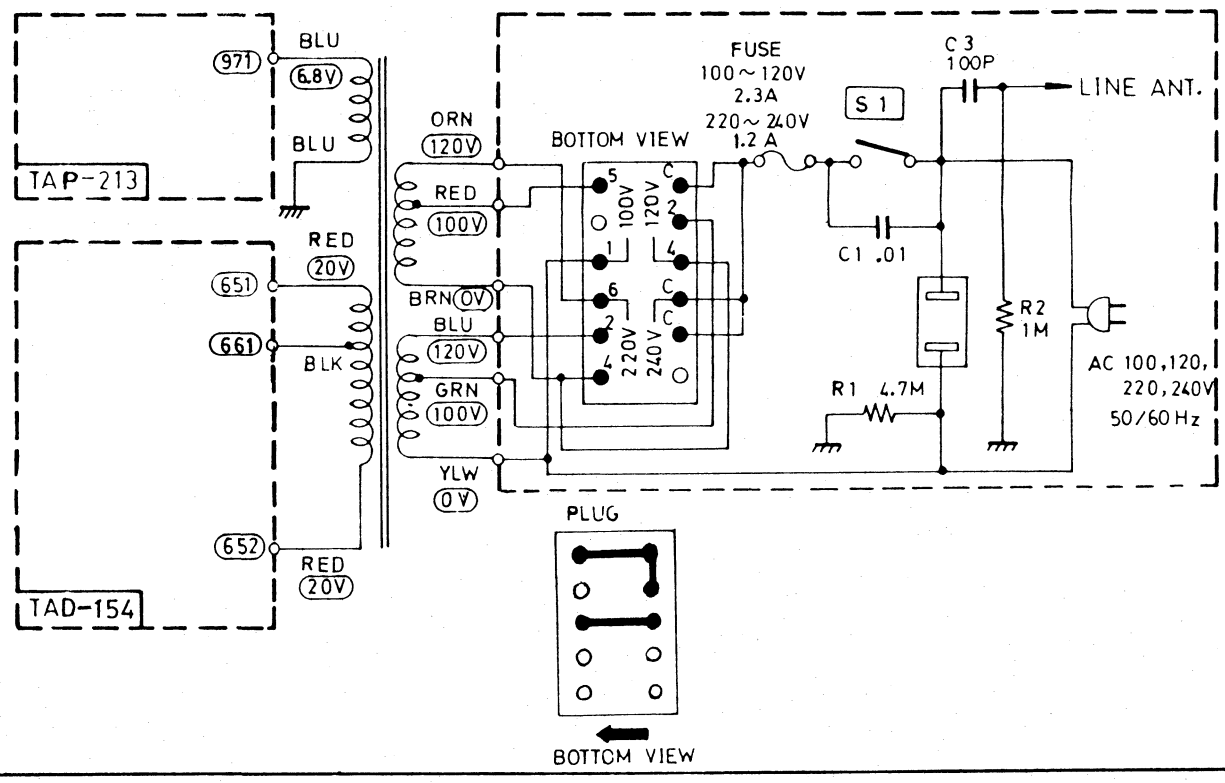


Subject to change without notice.

Printed in Japan E30539-421A,(O)

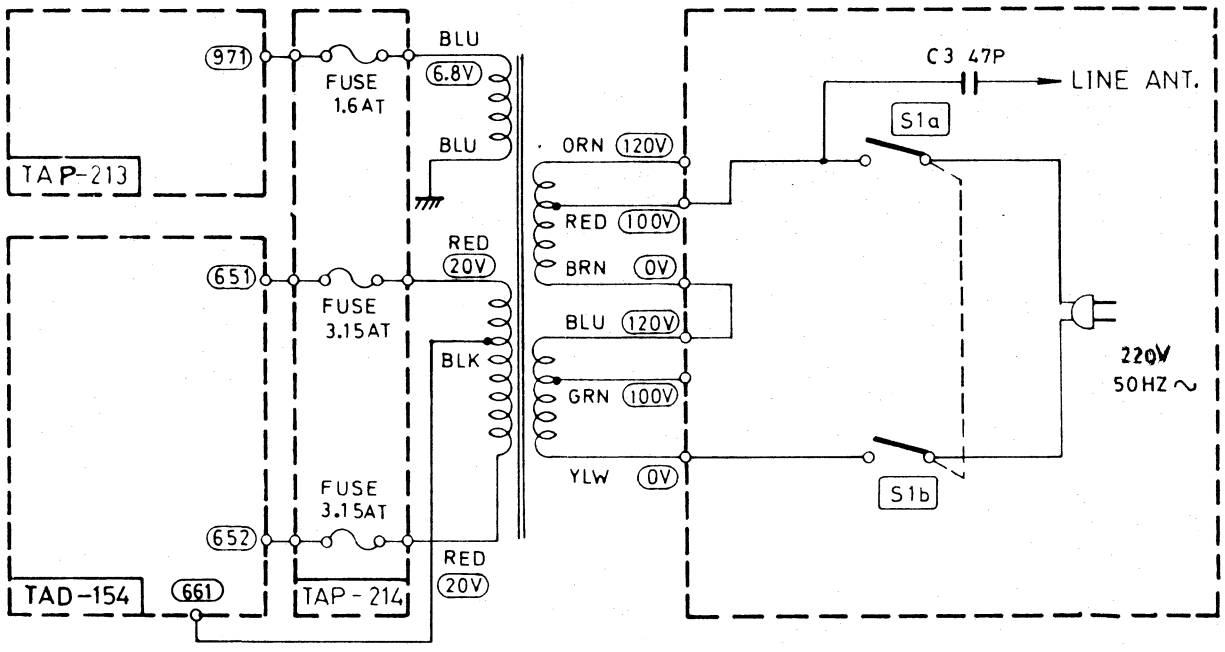
(F) FOR EUROPE

■ PRIMARY CIRCUIT (AC 100, 120, 220, 240V 50/60Hz)

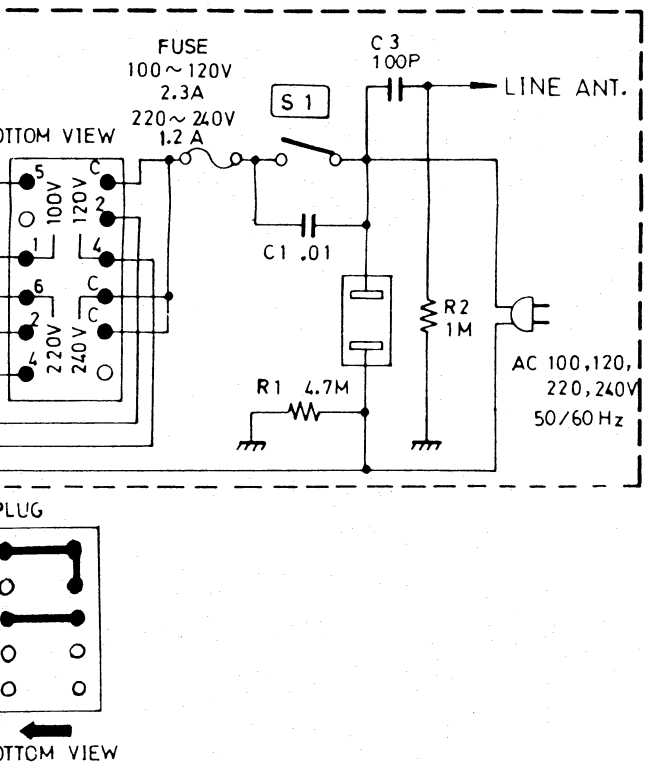


(E) FOR EUROPE

■ PRIMARY CIRCUIT (220V 50Hz~)

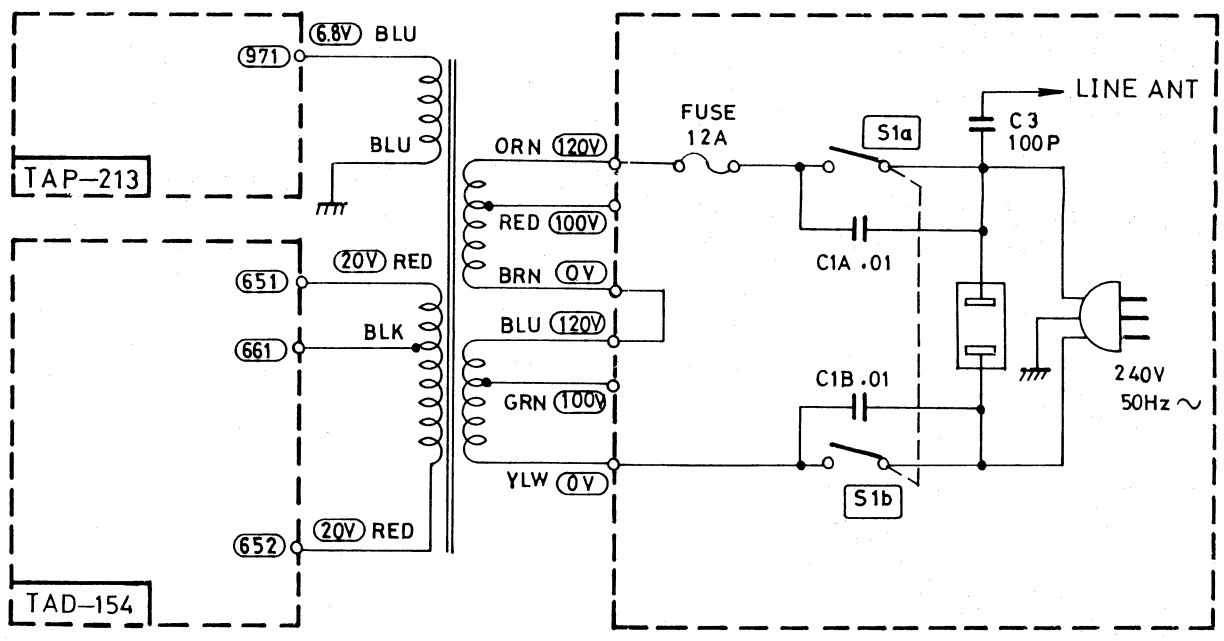


120, 220, 240V 50/60Hz)

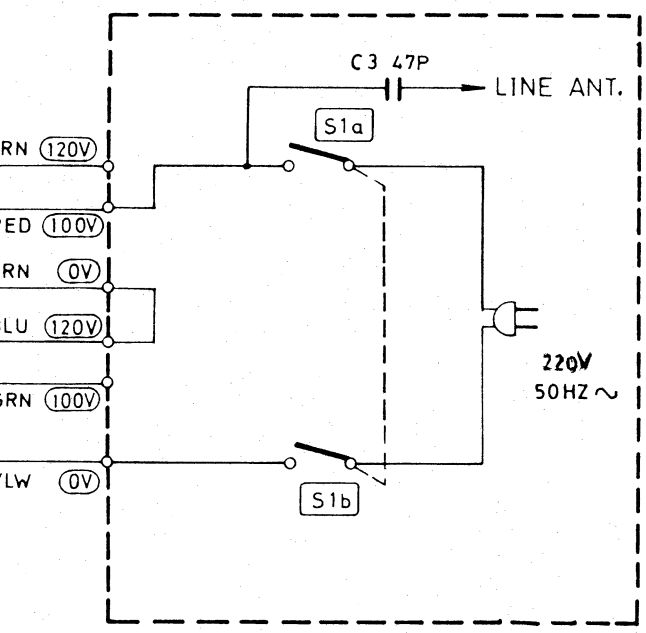


(A) FOR AUSTRARIA AND U.K.

■ PRIMARY CIRCUIT (240V 50Hz~)



0Hz~)



(A) FOR AUSTRARIA AND U.K.

■ PRIMARY CIRCUIT (240V 50Hz~)